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10/585,597

07/11/2006

Roger L. Kuhlman

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109 7590 03/15/2010

The Dow Chemical Company
Intellectual Property Section
P.O. Box 1967
Midland, MI 48641-1967

EXAMINER

MULLIS, JEFFREY C

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

03/15/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|---------------------------------------|--|
| Office Action Summary | Application No. 10/585,597 | Applicant(s) KUHLMAN ET AL. | |
| | Examiner Jeffrey C. Mullis | Art Unit 1796 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 November 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 7-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 11-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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Claims 1-6 and 11-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is not clear how "said olefin in the sidechain" can contain copolymerizable monomers in that olefins are not made up of monomers.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6 and 11-25 are rejected under 35 U.S.C. 102(b or a) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Torres et al. (either US 2004/0116610 or WO 02051893, cited by applicants).

Applicants provisional application 60/538355 requires the use of a chain end polyolefin which is specifically functionalized by amine, not broadly by a nucleophilic heteroatom and as such does not support the full scope of the claims even aside from the failure of applicants to properly claim benefit to any provisional application and applicants effective filing date is therefore 9-13-04. Torres '610 is therefore available as prior art under paragraph (a) of 35 USC 102. Torres '610 corresponds to Torres '893 and Torres '610 will be referred to since it is in English.

Torres discloses production of "graft" copolymers by a process requiring reaction of a functionalized polyolefin and a "mono-functional type oligomer" (abstract) said to be derived from olefinic monomers such as dienic monomers (paragraph 117) made by processes inherently introducing end fictionalization (paragraph 131 et seq). Note 4-methyl 1 pentene polyolefins at paragraph 63. Since the reference discloses branched olefinic polymers produced bt reaction of functionalized polyolefin and end functionalized polymers and the claims and reference encompass identical structures, similar or identical characteristics reasonably appear to be inherent.

When the reference discloses all the limitations of a claim except a property or function, and the Examiner cannot determine whether or not the reference inherently possesses properties which anticipate or render obvious the claimed invention, basis exists for shifting the burden of proof to applicant. Note In re Fitzgerald et al. 619 F. 2d 67, 70, 205 USPQ 594, 596, (CCPA 1980). See MPEP § 2112-2112.02.

Claims 1-6 and 11-25 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kojoh (either US 2003/0023002 or EP1270647, cited by applicants).

It is noted that Kojoh US '002 is equivalent to EP '647 and that EP '647 is available under paragraph (b) of 35 USC 102 even if 60/538355 fully supported the instant claims and even if applicants had properly claimed benefit to any provisional application.

Kojoh (US '002) discloses a "branched polyolefin" formed by reaction of an anhydride functionalized polyolefin and a terminally modified polyolefin (abstract). Note that paragraph 345 of the document discloses an example in which a reaction of a terminally aminated polyethylene with a malienated polyolefin takes place. Note that the polyolefin may be produced from 4-methyl-1-pentene at paragraphs 27 and 254.

When the reference discloses all the limitations of a claim except a property or function, and the Examiner cannot determine whether or not the reference inherently possesses properties which anticipate or render obvious the claimed invention, basis exists for shifting the burden of proof to applicant. Note In re Fitzgerald et al. 619 F. 2d 67, 70, 205 USPQ 594, 596, (CCPA 1980). See MPEP § 2112-2112.02.

Claims 1-5 and 11-25 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Krom (US 7,056,979).

Patentees disclose a reaction product of maleated polyolefin and amine terminated olefinic elastomers (column 2, lines 8-26).

When the reference discloses all the limitations of a claim except a property or function, and the Examiner cannot determine whether or not the reference inherently possesses properties which anticipate or render obvious the claimed invention, basis exists for shifting the burden of proof to applicant. Note In re Fitzgerald et al. 619 F. 2d 67, 70, 205 USPQ 594, 596, (CCPA 1980). See MPEP § 2112-2112.02.

Applicant's arguments filed 8-31-09 have been fully considered but they are not persuasive. Glass transition temperature is a function of the monomeric components of the polymer in question and not the method of polymerization. Polyolefins in general have very low glass transition temperatures and as polyolefins are disclosed in the prior art relied upon, applicants characteristic reasonably appear to be inherent. Torres teaches against production of an insoluble product at paragraph 105. Kojoh discloses a "soluble" product in paragraph 337 and the examiner sees no examples in Kojoh which would be expected to produce difunctional polymers for introduction of sidechains. Hydrocarbons containing carbon carbon double bonds are olefins as the term is used in the art and butadiene is therefore an olefin.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication should be directed to Jeffrey C. Mullis
M-f, 9-5pm at telephone number 571 272 1075.

Jeffrey C. Mullis
Primary Examiner
Art Unit 1796

JCM

3-11-2010

/Jeffrey C. Mullis/

Primary Examiner, Art Unit 1796

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